

REVIEW GUIDANCE FOR THE REVISED INTEGRATED SAFETY MANAGEMENT PLAN FOR CONSTRUCTION AUTHORIZATION



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PREFACE

As directed by Congress in Section 3139 of the *Strom Thurmond National Defense Authorization Act for Fiscal Year 1999*, the U.S. Department of Energy (DOE) established the Office of River Protection (ORP) at the Hanford Site to manage the River Protection Project (RPP), formerly known as the Tank Waste Remediation System. ORP is responsible for the safe storage, retrieval, treatment, and disposal of the high level nuclear waste stored in the 177 underground tanks at Hanford.

The initial concept for treatment and disposal of the high level wastes at Hanford was to use private industry to design, construct, and operate a Waste Treatment Plant (WTP) to process the waste. The concept was for DOE to enter into a fixed-price contract for the Contractor to build and operate a facility to treat the waste according to DOE specifications. In 1996, DOE selected two contractors to begin design of a WTP to accomplish this mission. In 1998, one of the contractors was eliminated, and design of the WTP was continued. However, in May 2000, DOE chose to terminate the privatization contract and seek new bidders under a different contract strategy. In December 2000, a team led by Bechtel National, Inc. was selected to continue design of the WTP and to subsequently build and commission the WTP.

A key element of the River Protection Project Waste Treatment Plant (RPP-WTP) is DOE regulation of safety through a specifically chartered, dedicated Office of Safety Regulation (OSR). The OSR reports directly to the ORP Manager. The regulation by the OSR is authorized by the document entitled *Policy for Radiological, Nuclear, and Process Safety Regulation of the River Protection Project Waste Treatment Plant Contractor* (DOE/RL-96-25) (referred to as the Policy) and implemented through the document entitled *Memorandum of Agreement for the Execution of Radiological, Nuclear, Process Safety Regulation of the RPP-WTP Contractor* (DOE/RL-96-26) (referred to as the MOA). These two documents provide the basis for the safety regulation of the RPP-WTP at Hanford.

The foundation of both the Policy and the MOA is that the mission of removal and immobilization of the existing large quantities of tank waste by the RPP-WTP Contractor must be accomplished safely, effectively, and efficiently.

The Policy maintains the essential elements of the regulatory program established by DOE in 1996 for the privatization contracts. The MOA clarifies the DOE organizational relationships and responsibilities for safety regulation of the RPP-WTP. The MOA provides a basis for key DOE officials to commit to teamwork in implementing the policy and achieve adequate safety of RPP-WTP activities.

The Policy, the MOA, the RPP-WTP Contract, and the four documents incorporated in the Contract define the essential elements of the regulatory program being executed by the OSR. The four documents incorporated into the Contract (and also in the MOA) are as follows:

Concept of the DOE Process for Radiological, Nuclear, and Process Safety Regulation of the RPP Waste Treatment Plant Contractor, DOE-96-0005,

DOE Process for Radiological, Nuclear, and Process Safety Regulation of the RPP Waste Treatment Plant Contractor, DOE/RL-96-0003,

Top-Level Radiological, Nuclear, and Process Safety Standards and Principles for the RPP Waste Treatment Plant Contractor, DOE/RL-96-0006, and

Process for Establishing a Set of Radiological, Nuclear, and Process Safety Standards and Requirements for the RPP Waste Treatment Plant Contractor, DOE/RL-96-0004.

DOE patterned its safety regulation of the RPP-WTP Contractor to be consistent with the concepts and principles of good regulation (reliability, clarity, openness, efficiency, and independence) used by the Nuclear Regulatory Commission (NRC). In addition, the DOE principles of integrated safety management were built into the regulatory program for design, construction, operation, and deactivation of the facility. The regulatory program for nuclear safety permits waste treatment services to occur on a timely, predictable, and stable basis, with attention to safety consistent with that which would occur from safety regulation by an external agency. DOE established OSR as a dedicated regulatory organization to be a single point of DOE contact for nuclear safety oversight and approvals for the WTP Contractor. The OSR performs nuclear safety review, approval, inspection, and verification activities for ORP using the NRC principles of good regulation while defining how the Contractor shall implement the principles of standards-based integrated safety management.

A key feature of this regulatory process is its definition of how the standards-based integrated safety management principles are implemented to develop a necessary and sufficient set of standards and requirements for the design, construction, operation, and deactivation of the RPP-WTP facility. This process meets the expectations of the DOE necessary and sufficient closure process (subsequently renamed Work Smart Standards process) in DOE Policy 450.3, *Authorizing Use of the Necessary and Sufficient Process for Standards-based Environment, Safety and Health Management*, and is intended to be a DOE approved process under DOE Acquisition Regulations, DEAR 970.5204-2, *Laws, Regulations and DOE Directives*, Section (c). DOE approval of the contractor-derived standards is assigned to the OSR.

The RPP-WTP Contractor has direct responsibility for WTP safety. DOE requires the Contractor to integrate safety into work planning and execution. This integrated safety management process emphasizes that the Contractor's direct responsibility for ensuring that safety is an integral part of mission accomplishment. DOE, through its safety regulation and management program, verifies that the Contractor achieves adequate safety by complying with approved safety requirements.

RECORD OF REVISION

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REVIEW GUIDANCE FOR THE REVISED INTEGRATED SAFETY MANAGEMENT PLAN FOR CONSTRUCTION AUTHORIZATION

1.0 INTRODUCTION

The River Protection Project-Waste Treatment Plant (RPP-WTP) Contractor is required to submit a Construction Authorization Request (CAR). The Office of Safety Regulation (OSR) will evaluate the CAR, issue the Preliminary Safety Evaluation Report (PSER), and recommend to the Manager, Office of River Protection, approval of the Construction Authorization Agreement. The guidance for review of the CAR submittal is contained in RL/REG-99-05, *Review Guidance for the Construction Authorization Request*.

At least 14 weeks before the CAR is submitted, the Contractor is required to submit a revised Integrated Safety Management Plan (ISMP) that contains all necessary supporting documentation.

The purpose of this advance submittal of the ISMP is for the OSR to complete as much of its review as possible within the 14-week period before receiving additional supporting information in the CAR. The ISMP review will then continue as part of the CAR review. Approval of the ISMP, along with any conditions of approval, will be documented within the PSER at the conclusion of the CAR review.

The Contractor's target schedule calls for submittal of the CAR in segments. The first segment is expected to include the ISMP update only.

This Review Guide has been developed for OSR review of the revised ISMP submittal only. Guidance for reviewing other portions of the Standards Approval (SA) Package will be addressed in other Guidance documents.

2.0 SCOPE

This Guide focuses on *changes* made to the ISMP. The Contract¹ requires that the Contractor submit documentation of the changes to the ISMP and the justification for changes that meet the criteria for an authorization basis change as identified in RL/REG-97-13, *Office of Safety Regulation Position on Contractor-Initiated Changes to the Authorization Basis*.²

DOE/RL-96-0003, *DOE Regulatory Process for Radiological, Nuclear, and Process Safety for the River Protection Project Waste Treatment Plant Contractor*,³ identifies approval criteria for the initial submittal of the ISMP and approval criteria for the CAR submittal. Among the CAR approval criteria, the following criterion (item 2) is related to review of changes to the ISMP:

¹ Contract No. DE-AC27-01RV14136 between DOE and BNI, December 11, 2000.

² Supporting documentation for changes that do not require OSR approval per RL/REG-97-13 need not be submitted with the SA Package but are retained for OSR review onsite.

³ Section 3.3.3, "Authorization for Construction," and Section 3.3.1, "Standards Approval."

“Proposed changes to the SRD [Safety Requirements Document] and ISMP are acceptable.”

3.0 REVIEW OF CHANGES TO THE ISMP

3.1 Purpose of Review

The purpose of this review is to determine whether changes to the Contractor’s ISMP are acceptable.

3.2 Areas of Review

The reviewer will determine whether the Contractor’s changes to the ISMP are acceptable.

3.3 Acceptance Criteria

3.3.1 Acceptability Review

The reviewer will determine whether the Contractor’s submittal concerning the description and justification of changes to the ISMP contains sufficient information to evaluate the submittal against the criteria in Section 3.3.3, “Regulatory Acceptance Criteria,” and is therefore ready for detailed review. If significant deficiencies are identified in the submittal, the Contractor will be requested to submit additional information before the start of the detailed review.

Acceptance of the ISMP for review does not imply approval of the ISMP submittal. Approval of the ISMP will be addressed in the PSER at the conclusion of the CAR review.

3.3.2 Regulatory and Contractual Requirements

DOE/RL-96-0003 states that the CAR submittal package shall consist of the following documentation:

“The current SRD and the ISMP and an assessment of compliance to the SRD and the ISMP (note the changes relative to the SRD and ISMP approved by the [Standards Approval] regulatory action).”⁴

For this review, this criterion is applicable only as it pertains to the ISMP changes. The embedded “SRD” and “assessment of compliance” will be performed during the CAR review.

In addition, DOE/RL-96-0003 (item 2) states that a construction authorization will be issued when the Safety Regulation Official (SRO) determines the following:

⁴ Section 4.3.2, “Contractor Input,” item D.

“The proposed changes to the SRD and ISMP are acceptable.”

Related requirements for the ISMP revision are also found in the ISMP, Section 3.3.2, “Control of the Authorization Basis.”

3.3.3 Regulatory Acceptance Criteria

The revised ISMP is acceptable if the following criteria are met:

1. The proposed changes to the SRD and ISMP are acceptable.
2. The SRD and ISMP comply with the ISMP, Section 3.3.2, “Control of the Authorization Basis.”

3.4 Review Procedures

The reviewer will determine whether the Contractor’s information outlined in the acceptance criteria in Section 3.3 of this Guide has been provided and is sufficiently detailed so that the reviewer has an adequate understanding of the justification for changes to the ISMP. Based on the information provided, the reviewer will evaluate the acceptability of changes to the ISMP.

The following is a more explicit discussion of how the reviewer is to determine whether regulatory acceptance criteria above have been met.

1. **Criterion:** The proposed changes to the SRD and ISMP are acceptable.

Changes to the ISMP, in comparison to the last approved version, fall into the following two categories:

- Revisions to the ISMP based on Authorization Basis Amendment Requests (ABARs) that were previously submitted by the Contractor and approved by the OSR – The acceptability of such changes has been previously established through approval of the ABARs and is not within the scope of the revised SA Package review (see RL/REG-97-13).
- Revisions to the ISMP that were not the subject of any previous ABAR – The Contractor must support any such changes that meet the criteria for an authorization basis change as identified in RL/REG-97-13⁵ with information that would normally accompany an ABAR.

The Contractor may revise the ISMP (1) without OSR prior approval or (2) under a request for OSR approval, depending on the content of the revision.

⁵ Supporting documentation for changes that do not require OSR approval per RL/REG-97-13 do not need to be submitted with the SA Package but are retained for OSR review onsite.

The Contractor may revise the ISMP before the CAR is submitted without prior approval of the OSR if the revisions do not do any of the following (as stated in RL/REG-97-13):

- Involve “either deletion or modification of a standard previously identified or established in the approved SRD.”
- Reduce a “commitment currently described in the Authorization Basis.”
- “Result in a reduction in the effectiveness of any program, procedure, or plan described in the Authorization Basis.”⁶

The Contractor may revise the ISMP through a request for OSR approval to amend the authorization basis. In this case, the Contractor must provide justification as outlined⁷ in RL/REG-97-13. However, RL/REG-97-13 also states that documents submitted to the OSR in connection with a regulatory action may be superseded by documents submitted in subsequent regulatory actions.

In these cases, the revised ISMP is acceptable (1) if revisions do not reduce a commitment currently described in the authorization basis or (2) if revisions do not result in a reduction in the effectiveness of any program, procedure, or plan described in the authorization basis, or (3) if reductions in commitments or effectiveness are proposed, the revision is acceptable if the Contractor adequately justifies the related change to the ISMP. The criteria for justification of the change are found in DOE/RL-96-0003, Section 3.3.1, “Standards Approval.” The reviewer should verify that the proposed change addresses all the relevant Section 3.3.1 criteria.

2. The ISMP complies with the related ISMP, Section 3.3.2, “Control of the Authorization Basis,” which states the following:

“The authorization basis for [the] RPP-WTP is considered as an element of the technical baseline for the facility. Changes to the technical baseline are managed by a configuration management program. For further information concerning configuration management, see ISMP Sections 1.3.16 and 5.3, “Configuration Management.”

Paragraph (e)(2)(iii) of Standard 7 of the Contract states the following:

“The Contractor’s Integrated Safety Management Plan shall conform with both RL/REG-97-13, *Office of Safety Regulation Position on Contractor-Initiated Changes to the Authorization Basis...*”

The review of the SA Package for this criterion is limited to verifying that changes to the ISMP were made according to approved procedures for controlling the authorization basis.

⁶ Items 1, 3, and 5, p. 4.

⁷ Section 3.6, p. 5.

3.5 Evaluation Findings

If changes to the ISMP are acceptable after the 14-week review is completed, the reviewer will prepare input for the PSER,⁸ stating that pending additional information to be provided in the CAR, the following has been determined.

The Contractor's ISMP has been reviewed against the regulatory acceptance criteria in Section 3.3.2 of this Guide and the following was determined:

- The proposed changes to the ISMP are acceptable.
- The ISMP complies with the related ISMP, Section 3.3.2, "Control of the Authorization Basis."

The reviewer concludes that the Contractor has complied with the general requirements for changes to the ISMP. Any exceptions should be noted and stated in a way to provide the Contractor with a clear understanding of the necessary revisions to satisfy the SRO. The reviewer may recommend to the SRO that the submittal be conditionally approved with provisions for the Contractor to submit additional information within a specified timeframe.

4.0 REFERENCES

DOE/RL-96-0003, *DOE Regulatory Process for Radiological, Nuclear, and Process Safety for the River Protection Project Waste Treatment Plant Contractor*, Rev. 2, U.S. Department of Energy, Office of River Protection, 2001.

RL/REG-97-13, *Office of Safety Regulation Position on Contractor-Initiated Changes to the Authorization Basis*, Rev. 5, U.S. Department of Energy, 1999.

RL/REG-99-05, *Review Guidance for the Construction Authorization Request (CAR)*, Rev. 3, U.S. Department of Energy, Office of River Protection, 2001.

5.0 LIST OF TERMS

ABAR	Authorization Basis Amendment Request
CAR	Construction Authorization Request
DOE	U.S. Department of Energy
ISMP	Integrated Safety Management Plan
PSER	Preliminary Safety Evaluation Report
OSR	Office of Safety Regulation
SA Package	Standards Approval Package
SRD	Safety Requirements Document
SRO	Safety Regulation Official
RPP-WTP	River Protection Project-Waste Treatment Plant

⁸ The preliminary draft PSER addressing ISMP compliance will be finalized when the CAR review is completed.

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